

REMARKS/ARGUMENTS

Favorable consideration of this application is respectfully requested. Applicant has amended claims 7 and 10, canceled claims 1-6, 9 and 12 through 20 and added new claims 21-40. No new matter has been added. Favorable reconsideration of this application is, consequently, earnestly solicited in view of the following remarks.

Drawing Objection:

Figures 1a and 1b were objected to alleging that they were not clear enough for the examiner to see the details of the invention. New replacement figures for Figures 1-3 are attached herewith. Figs. 3a and 3b have been amended to add the Fresnel lens 710 as described on page 9 lines 8-9 and Fig. 3c has been amended to add Fresnel lenses 811 and 812 as described on page 10, lines 3-4 of the detailed description.

Specification Objection:

The detailed description of the preferred embodiment was objected to because at page 9, line 22, the disclosure should refer to reference numbers 805 and 806 and not reference numbers 804 and 806. The specification has been amended to overcome examiners objection.

Claim Objections:

Claims 5, 6 and 4 have been cancelled. Thus remove of the objection is respectfully requested.

Claim Rejections - 35 U.S.C. § 112:

Claims 6, 13, 14, 15-20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Applicant thanks Examiner for

examining claims 6, and 13-20 as best understood by the Examiner. Claims 6, 13, 14 and 15-20 have been cancelled. Thus, Applicant respectfully requests the examiner to remove the rejection.

Claim Rejections – 35 U.S.C. § 102:

Claim 7-9, 15, 16 and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by Larson (US 5,418,584).

Regarding claim 7, Examiner alleges that Larson discloses a method of providing a wide field of view to a HMPD by combining an ARC display component (retroreflector array/visor 11) and an optical tiling display (image source 21, prism beamsplitter 22 and relay lens 23). Both systems include a display component, the ARC display 807 shown in Fig. 7 of the present application and the retroreflector array/visor (11, Fig. 4b).

However, examiner failed to explain the correlation between the optical tiling display 803, 806 shown in Fig. 3c of the present application and the image source 21, prism 22, and relay lens 23. In fact, the components 21, 22 and 23 (Fig. 4a) identified by the examiner are only a part of the optical system in Larson, to produce an image for the user fold mirror 24, intermediate diffuser 26, projector lens 19, and beamsplitter 14 are also required to produce the light 17 that hits the retroreflector 11 and is reflected back to the beamsplitter to the eye. The complex optical system of Larson (Figs. 4a and 4b) bears no resemblance to the single tiling component (Fig. 2) of the present invention which consists of a cube and a wedge. Furthermore, the systems differ in that Larson discloses a system where the image is reflected from the retroreflector to the eye while the present invention displays three-dimensional objects (Fig. 1) in visual space at surfaces 808, 809 and 810 as shown in Fig. 3c.

For these reasons, Applicant believes that claim 7 is allowable over 35 U.S.C. 102. However, claim 7 has been amended to clarify that the optical tiling display recited in claim 7 is the optical tiling component recited in the description of the preferred embodiment and has further amended claim 7 to clarify that a left projected image and a right projected image are produced in the integrating step and that the left projected image and right projected image form the overall binocular field of view as shown in Fig. 3c.

Regarding claim 8, Examiner rejected the claim because Larson teaches a system for use with a head mounted projection display that has a range of more than 100 degrees horizontal and 50 degrees vertical (col. 4 lines 50-55). However, the description in Larson includes the further limitation of (1) 100 percent overlap and (2) a single image source in the same sentence (Fig. 4a and 4b) and requires the components be within the head mounted display. The present invention does not include these limitations and claim 7 does not include the limitation of the ARC display connected with the helmet. For these reasons, combined with the reasons provided in regard to claim 7, applicant believes that claim 8 is allowable under 35 U.S.C. 102 over Larson.

Regarding claims 9, 15, 16 and 18, Applicant has cancelled claims 9, 15, 16 and 18. For these reasons, Applicant respectfully requests the Examiner to remove the rejection.

Claim Rejections – 35 U.S.C. § 103:

Claims 1-4 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fisher (US 5,572,229) in view of Larson (US 5,418,584). Claims 1-4 and claim 6

have been cancelled. Thus, Applicant respectfully requests Examiner to remove the rejection

Claims 10 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson (US 5,418,584). Regarding claim 10, Applicant has amended claim 7 to overcome the 35 U.S.C. § 102(b) over Larson. Claim 10 depends from amended claim 7, thus Applicant believes that claim 10 is allowable under 35 U.S.C. § 103(a) over Larson. Regarding claim 17, Applicant has cancelled claim 17. Thus removal of the rejection is respectfully requested.

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Fisher (US 5,572,229) in view of Larson (US 5,418,584), further in view of Rallison et al. (US 6,097,543). Claim 5 has been cancelled. Thus removal of the rejection is respectfully requested.

Claims 11 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson (US 5,418,584) in view of Rallison et al. (US 6,097,543).

Regarding claim 11, dependent claim 11 depends from independent claim 7 which has been amended to overcome rejection under 35 U.S.C. § 102(b) as being anticipated by Larson. For the reasons provided in regard to claim 7, applicant believes that dependent claim 11 is allowable under 35 U.S.C. § 103(a) over Larson (US 5,418,584) in view of Rallison et al. Regarding claim 19, Applicant has cancelled claim 19. Thus removal of the rejection is respectfully requested.

Claims 12-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fisher (US 5,572,229) in view of Hua et al. (An Ultra-light and Compact Design and

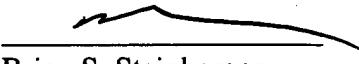
Implementation of Head-Mounted Projective Display). Applicant has cancelled claims 12 through 14. Thus removal of the rejection is respectfully requested.

Claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson (US 5,418,584) in view of Hua et al. (An Ultra-light and Compact Design and Implementation of Head-Mounted Projective Display). Applicant has cancelled claim 20. Thus removal of the rejection is respectfully requested.

Claims 1-6, 9 and 12-20 have been cancelled. New claims 21-40 have been added to more clearly claim the subject matter which Applicant regards as the invention. No new matter has been added.

In view of the foregoing considerations, it is respectfully urged that claims 7-8, 10-11 and claims 21-40 be allowed. Such action is respectfully requested. If the Examiner believes that an interview would be helpful, the Examiner is requested to contact the attorney at the below listed number.

Respectfully Submitted;



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Amendments to the Drawings:

The attached sheet of drawings includes changes to Figs. 1-3. These sheets, which include Figs. 1a-1b, Fig. 2, and Figs. 3a-3c replace the original sheet including Figs. 1a-1b, 2, and 3a-3c.

Attachment: 4 Replacement Sheets of Figs. 1-3